

YAMAHA

**GUITAR AMPLIFIER
AMPLIFICATEUR DE GUITARE**

VR4000 **stereo**

**GUITAR AMPLIFIER
AMPLIFICATEUR DE GUITARE**

VR6000 **stereo**

**OPERATION MANUAL
MODE D'EMPLOI**

● INTRODUCTION

Congratulations!

You are now the proud owner of a Yamaha VR4000/VR6000 Stereo Guitar Amplifier. Your VR4000/VR6000 represents an exciting new concept in guitar amplifier design which provides vastly extended performance and creative potential in all areas. In addition to extraordinary flexibility and superior sound, it offers a broad range of control features and outstanding reliability.

In order to obtain maximum performance from your VR4000/VR6000, we urge you to read this operation manual thoroughly, and keep it in a safe place for later reference.

● MAIN FEATURES

★ 2-channel 2-mode Configuration

From the input jacks to speakers, the VR4000 and VR6000 feature an independent 2-channel circuit configuration which allows the "A" and "B" channels to function essentially as two separate amplifiers. In addition to this you have a choice of "A or B" or "A and B" modes, selected by a single switch. In the "A or B" mode the two channels function separately and independent settings can be made for each, while in the "A and B" mode the channels are "coupled" and operate together.

★ Compatible with Stereo Sources

Guitars with stereo outputs or separate guitars can be connected to the amplifier's two channels, and each channel can be independently set to create the desired sound.

★ Separate Channel Control Configurations

The "A" and "B" channels have slightly different control configurations: the "A" channel has a single volume control allowing production of clean, pure tones, while the "B" channel has both gain and volume controls for a broad range of distortion effects. Both channels feature three-band tone controls as well as "bright" and "fat" switches for extended tonal versatility.

★ Parametric Equalizers

Both channels feature versatile parametric equalizers that let you precisely pinpoint and boost or cut specific frequencies for uncompromising response control accuracy. The VR6000 offers extra control with twin parametric equalizers.

★ Reverb & Stereo Chorus

Top-quality reverb and stereo chorus effects are built-in. In particular, the stereo chorus effect employs both normal and reverse-phase chorus signals to produce an exceptionally fine chorus sound.

★ Newly-developed Large-diameter Speakers

These speakers were developed specially for the VR4000 and VR6000, featuring aluminum center-caps and large-diameter cones they deliver powerful, clean sound from the heaviest lows to the most sparkling highs.

★ Dual Effect Loops

The VR4000 and VR6000 have dual effect loops for compatibility with a wide range of external signal processing equipment. The first loop is located prior to the chorus circuit and is compatible with 1-in/2-out type effect units. The second is located after the chorus circuit and offers 2-in/2-out compatibility.

★ Stereo Outputs & Stereo Headphones Jack

Both the line output jacks and headphone output jack offer full stereo output.

★ Footswitch Jack

An optional VFC-3 Footswitch connected to this jack can be used to switch between the "A" and "B" channels in the "A or B" mode, switch the reverb effect ON or OFF, and switch the chorus effect ON or OFF.

● CONTENTS

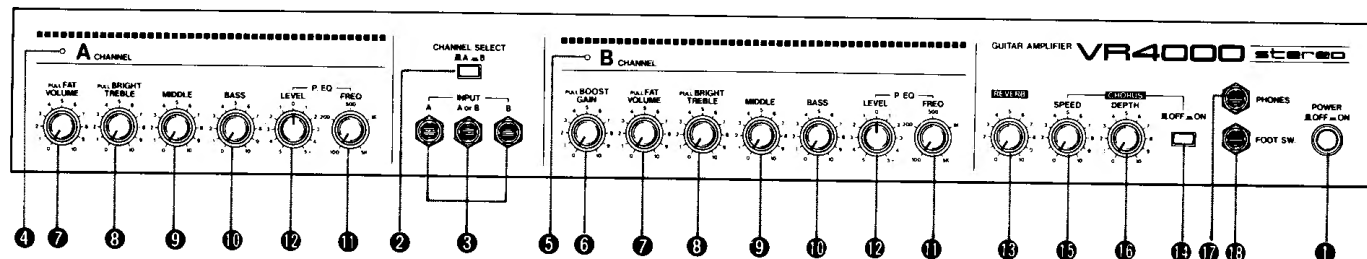
Precautions	2
Control Panel	3
Rear Panel	5
Connecting Instruments	6
System Example	7
Control Setting Examples	7
Specifications	9
Block Diagram	10

● PRECAUTIONS

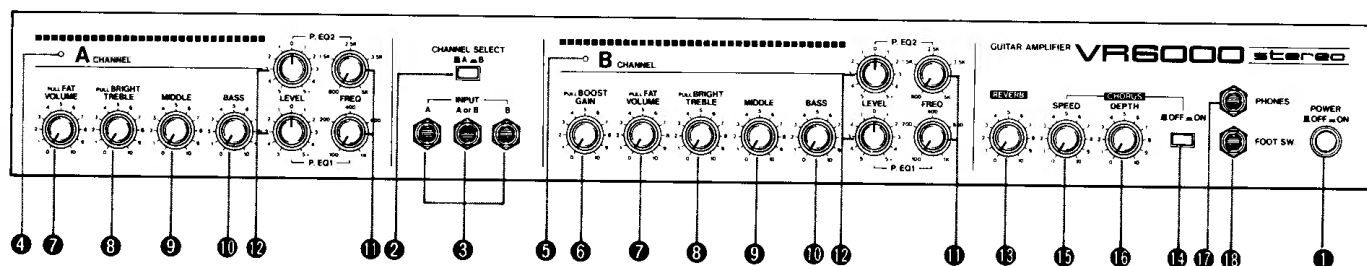
- ◆ Avoid setting up your amplifier in the following locations to prevent possible damage:
 - In direct sunlight or next to heating equipment.
 - Extremely cold locations.
 - Locations exposed to high humidity or excessive dust.
 - Locations subject to strong shocks or vibration.
- ◆ In order to prevent damage to the speakers when plugging in connecting cables or turning the power ON/OFF, be sure to set the volume controls to their minimum settings.
- ◆ Make sure your amplifier is rated for the AC mains voltage in your area. Voltage ratings are given to the left of the rear panel. (General model only)
- ◆ If the fuse needs replacement, replace only with a fuse of the same type and power rating.
- ◆ The rear panel AC power outlet can provide a maximum of 250 watts of power. The total power rating of equipment connected to this outlet must be less than 250 watts. (For U.S. & Canadian models)
- ◆ Your Yamaha guitar amplifier is a precision musical instrument. Handle it with care and avoid dropping or bumping it.
- ◆ For safety, always remove the power plug from the AC wall outlet if there is any danger of lightning striking in your area.
- ◆ Keep the amplifier away from neon signs of fluorescent lighting to prevent noise pickup.
- ◆ To prevent damage and possibly electrical shock, never open the case and tamper with the internal circuitry.

● CONTROL PANEL

• VR4000





• VR6000



① POWER Switch

Press once to turn power ON, a second time to turn power OFF.

② CHANNEL SELECT Switch

This switch functions only when the VR4000/VR6000 is set to the "A or B" mode (see CHANNEL MODE switch on rear panel). When the CHANNEL SELECT switch is in the  position, channel A is selected and only channel A will function. When the CHANNEL SELECT switch is in the  position, channel B is selected and only channel B will function. The A CHANNEL indicator ④ or B CHANNEL indicator ⑤ will light according to the selected channel.

* Refer to the "CONNECTING INSTRUMENTS" section on page 6.

* An optional footswitch connected to the FOOT SW jack ⑬ can also be used to switch between channel A and channel B. The front-panel CHANNEL SELECT switch becomes inoperative when the footswitch is used.

③ INPUT Jacks

These jacks accept output from electric guitars. See "CONNECTING INSTRUMENTS" on page 6 for details.

④ A CHANNEL Indicator

⑤ B CHANNEL Indicator

These indicators show which if the two amplifier channels is currently operating. The A CHANNEL indicator lights when the A channel is active, and the B CHANNEL indicator lights when the B channel is active.

⑥ GAIN Control (with PULL BOOST Switch)

The GAIN control is provided only on the B channel, and is used to adjust the amount of distortion applied to the sound of this channel. As the GAIN control is rotated clockwise toward the "10" end of the scale, the B-channel gain increases causing an increase in volume and distortion. Pulling the GAIN switch out towards you activates the BOOST function, applying even greater distortion to the B-channel sound.

The overall volume and distortion level achieved depends on the settings of both the GAIN control and B-channel VOLUME control. Generally, it is best to use the GAIN control first to set the desired degree of distortion, then use the VOLUME control to set the desired volume level.

* If the GAIN control is set to "0," no sound will be output from the B channel.

⑦ VOLUME Control (with PULL FAT Switch)

This control sets the overall volume level of the corresponding channel. Pulling the VOLUME control out towards you activates the FAT function, boosting the midrange frequencies for a full, "fat" sound.

⑧ TREBLE Control (with PULL BRIGHT Switch)

Adjusts the level of the high-frequency range. If you pull the TREBLE control out towards you the BRIGHT function is activated, further emphasizing the high frequencies for a sharp, brilliant sound.

⑨ MIDDLE Control

Adjusts the level of the midrange frequencies.

⑩ BASS Control

Adjusts the level of the low frequencies.

* If the TREBLE, MIDDLE and BASS controls are set to their center "5" positions, a fairly flat, "normal" sound is produced. If the TREBLE, MIDDLE and BASS controls are all set to their minimum "0" positions, no sound will be output.

⑪ P. EQ FREQ Control

The P. EQ FREQ control sets the center frequency of a range of frequencies to be boosted or cut using the P. EQ LEVEL control ⑫.

The VR4000 P. EQ FREQ control covers a frequency range from 100 Hz to 5 kHz.

The VR6000 has twin parametric equalizers which cover different frequency ranges, permitting two-point equalization. The P. EQ 1 FREQ control adjusts the EQ center frequency from 100 Hz to 1 kHz, and the P. EQ 2 FREQ control adjusts from 800 Hz to 5 kHz.

⑫ P. EQ LEVEL Control

The P. EQ LEVEL control permits applying a maximum of 15 dB boost or cut at the center frequency set using the corresponding P. EQ FREQ control ⑪.

If no equalization is required, set the LEVEL control to its center "0" position.

⑬ REVERB Control

This control adjusts the amount of reverb effect applied to both the A and B channels. If no reverb is required, set the REVERB control to its minimum "0" position.

* The reverb effect can be switched ON and OFF using the optional VFC-3 footswitch.

⑭ CHORUS Switch


The CHORUS switch turns the internal stereo chorus effect ON or OFF for both the A and B channels.

* The chorus effect can also be switched ON and OFF using the optional VFC-3 footswitch. When the footswitch is used, the front-panel CHORUS switch becomes inoperative.

⑮ CHORUS SPEED Control

Adjusts the speed of chorus effect variation for both the A and B channels.

⑯ CHORUS DEPTH Control

Adjusts the depth (intensity) of the chorus effect for both the A and B channels. A slight chorus effect will remain even if this control is set to its minimum "0" position. The CHORUS switch ⑭ must be turned OFF () to completely cancel the chorus sound.

⑰ PHONES Jack

The PHONES jack accepts any standard pair of stereo headphones with an impedance rating between about 8 and 150 ohms. The left headphone speaker receives the same signal that appears at the rear-panel LINE OUT L jack, and the right headphone speaker receives the same signal that appears at the LINE OUT R jack. Sound is output from the main speakers even if a pair of headphones is plugged into the PHONES jack. If you require headphone sound only, temporarily remove the plugs connected to the rear-panel SP OUT jacks.

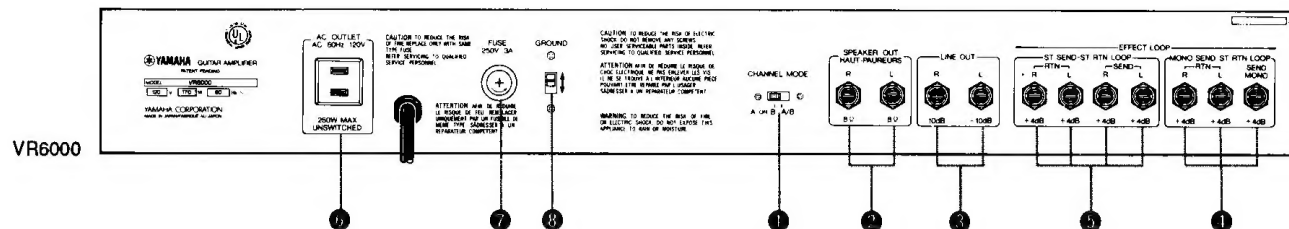
⑱ FOOT SW Jack

Accepts the optional VFC-3 Footswitch. When the VFC-3 is plugged into this jack, it can be used to switch between the A and B channels, turn the reverb effect ON and OFF, and turn the chorus effect ON and OFF.

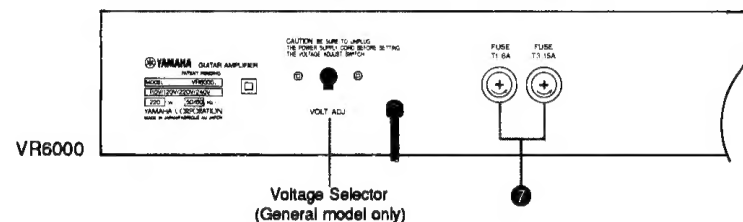
* Use ONLY the Yamaha VFC-3 Footswitch with this jack. Other footswitches can damage your amplifier.

● REAR PANEL

U.S. & Canadian models



General model



① CHANNEL MODE Switch

The CHANNEL MODE switch selects the amplifier's operational mode: "A" or "B" for selectable operation of either the A channel or B channel alone, or "A/B" for simultaneous operation of both the A and B channels. Always turn the amplifier's POWER switch OFF when changing the setting of this switch.

* Refer to "CONNECTING INSTRUMENTS" on page 6 for more information.

② SP OUT Jacks

Normally, the amplifier's internal L and R speakers are connected to these jacks. It is possible, however, to unplug the internal speakers and connect external speakers to these jacks. In this case, make sure the system impedance of each external speaker connected to the SP OUT jacks is 8 ohms, and that the speakers can handle the full power output of the amplifier.

③ LINE OUT Jacks

These jacks deliver a line-level output signal from the left and right channels of the amplifier for connection to a mixing console, an external power amplifier system or other line-level equipment. The signal delivered to these jacks is the same as that delivered to the internal L and R speakers. The effect of the internal chorus system or external stereo signal processors is delivered to these jacks in full stereo.

The rated output level of the LINE OUT jacks is -10 dB.

④ MONO SND — ST RTN LOOP Jacks

These jacks are ideally suited for connection to an external signal processor with a single input and stereo outputs. The SEND MONO jack should be connected to the input of the external signal processor, and the stereo outputs from the signal processor should be connected to the L and R RTN jacks. When the outputs from the signal processor are plugged into the amplifier's RTN jacks, the signal processor is effectively inserted into the amplifier's signal path.

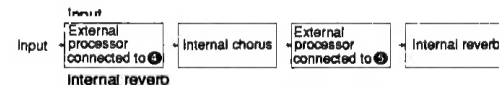
Rated input and output level for these jacks is +4 dB.

⑤ ST SEND — ST RTN LOOP Jacks

These jacks are suited for connection to an external signal processor with stereo inputs and outputs. The SEND L and R jacks should be connected to the inputs of the external signal processor, and the stereo outputs from the signal processor should be connected to the L and R RTN jacks. When the outputs from the signal processor are plugged into the amplifier's RTN jacks, the signal processor is effectively inserted into the amplifier's signal path.

Rated input and output level for these jacks is +4 dB.

* The circuit positions of the effect loops in relation to the amplifier's internal effect processors are as shown below. Refer to the "BLOCK DIAGRAM" on page 10 for more details.



⑥ AC OUTLET (UNSWITCHED) (U.S. & Canadian models only)

Other equipment with a total power consumption of no more than 250 watts can be powered from this AC outlet.

⑦ FUSE

If the fuse blows and needs replacing, first unplug the AC power cord and then replace the fuse with a new one of exactly the same type and power rating.

If the fuse blows again immediately after replacement, there may be a fault in the amplifier's circuitry. If this happens, have the amplifier checked by qualified Yamaha service personnel.

⑧ GROUND Switch (U.S. & Canadian models only)

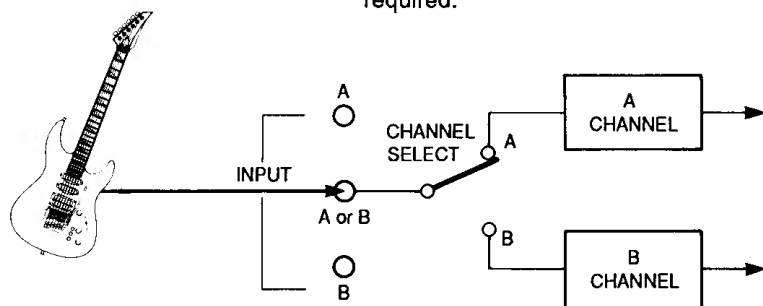
This switch reverses the ground polarity of the AC power line. Set it to the position in which you hear the least hum and noise from the amplifier.

● CONNECTING INSTRUMENTS

The type of guitar you use and the way you intend to use the A and B channels will determine how you connect your instrument and set the channel-related switches. The following connection examples should help you decide on the setup that's right for you.

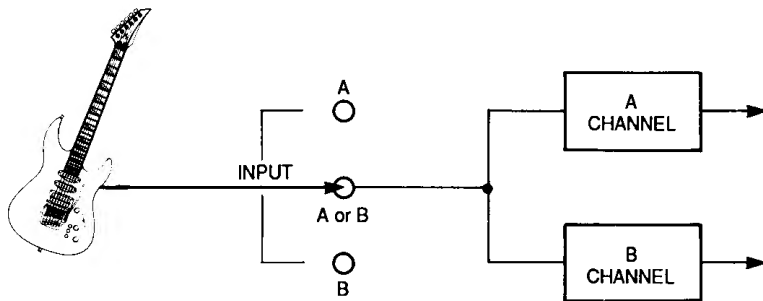
◆ A MONO-OUTPUT GUITAR VIA EITHER THE A OR B CHANNEL

- GUITAR: Connect to the "A or B" INPUT jack.
- CHANNEL MODE SWITCH: Set to "A or B" (switch on rear panel).
- CHANNEL SELECT SWITCH: Use to select the A or B channel as required.



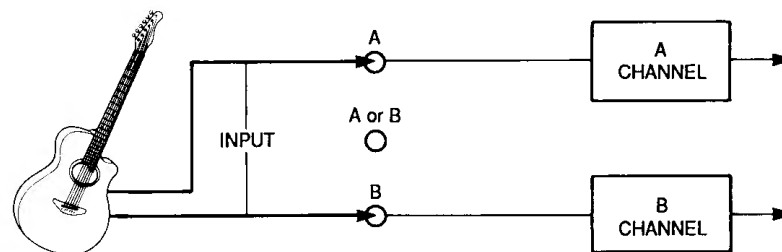
◆ A MONO-OUTPUT GUITAR VIA BOTH THE A AND B CHANNELS

- GUITAR: Connect to the "A or B" INPUT jack.
- CHANNEL MODE SWITCH: Set to "A/B" (switch on rear panel).
- CHANNEL SELECT SWITCH: Not used.



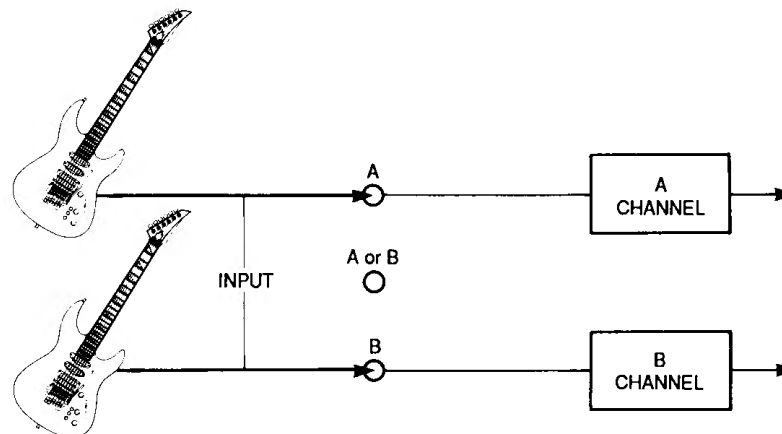
◆ STEREO-OUTPUT GUITAR WITH EACH OUTPUT FEEDING A SEPARATE CHANNEL

- GUITAR: Connect the stereo outputs to the "A" and "B" INPUT jacks.
- CHANNEL MODE SWITCH: Set to "A/B" (switch on rear panel).
- CHANNEL SELECT SWITCH: Not used.



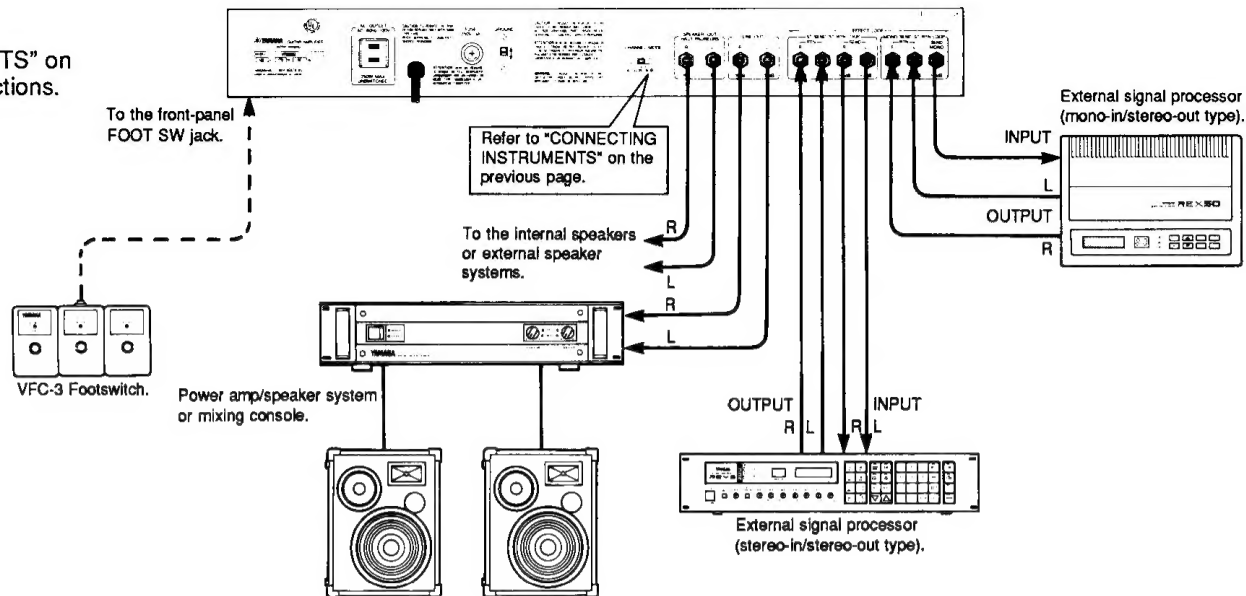
◆ TWO MONO GUITARS FEEDING SEPARATE CHANNELS

- GUITARS: Connect to the "A" and "B" INPUT jacks.
- CHANNEL MODE SWITCH: Set to "A/B" (switch on rear panel).
- CHANNEL SELECT SWITCH: Not used.



● SYSTEM EXAMPLE

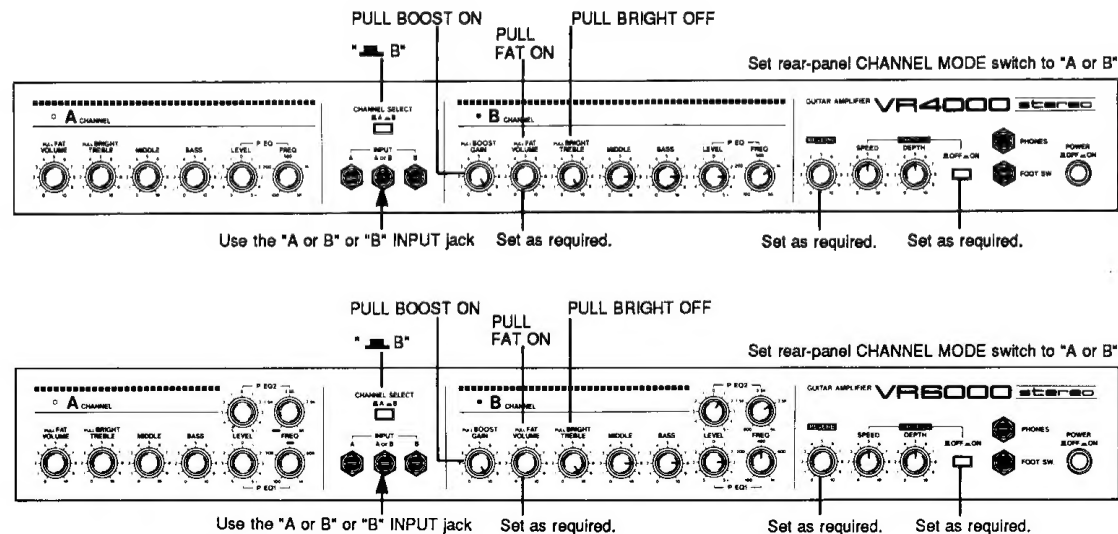
See "CONNECTING INSTRUMENTS" on the previous page for input connections.



● CONTROL SETTING EXAMPLES

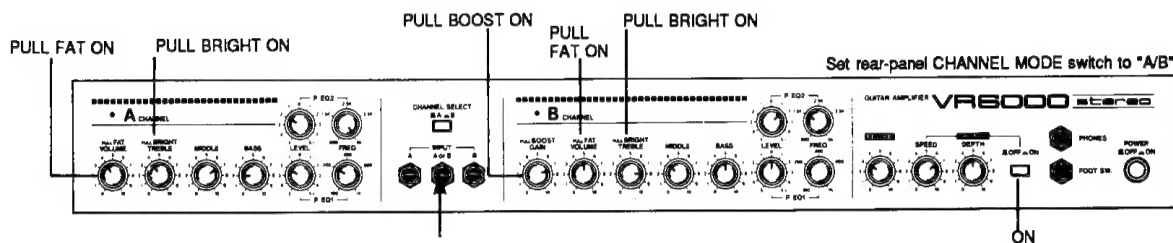
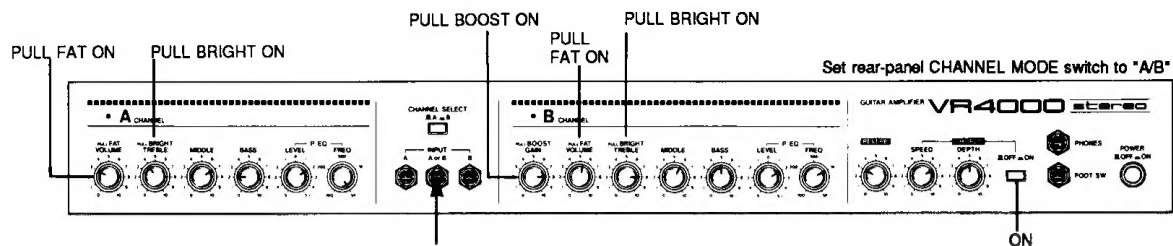
1. METAL SOUND

This setting produces a very punchy distortion sound. For a crisp attack turn the CHORUS effect ON, or turn CHORUS OFF for smoother effect.



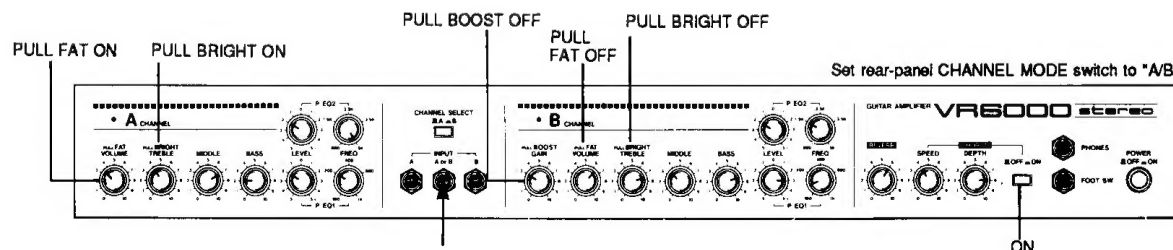
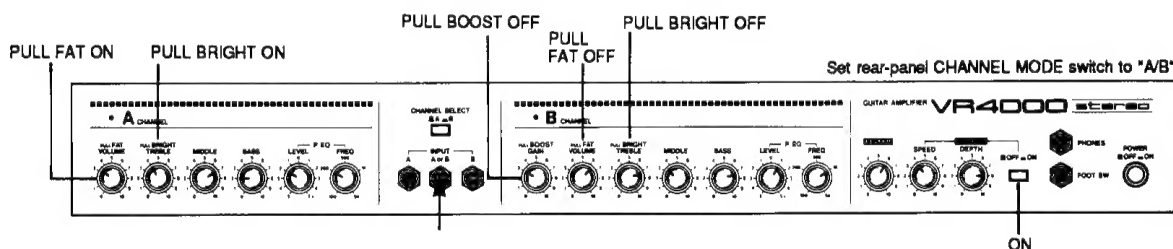
2. ROCK 'N ROLL

This setting makes use of the A/B mode. A well-defined, crisp sound is produced by the A channel, while the B channel is used to add fullness and a touch of distortion. The mix of the two channels results in a rich, vibrant sound. Try adding chorus for more depth.



3. ELECTRIC ACOUSTIC GUITAR

This setting can make an electric guitar sound more like an electric acoustic guitar. The A channel provides brilliance, while the B channel adds depth. Turning the chorus effect ON adds extra breadth to the sound. This sound works beautifully with broken chords and arpeggios.



● SPECIFICATIONS

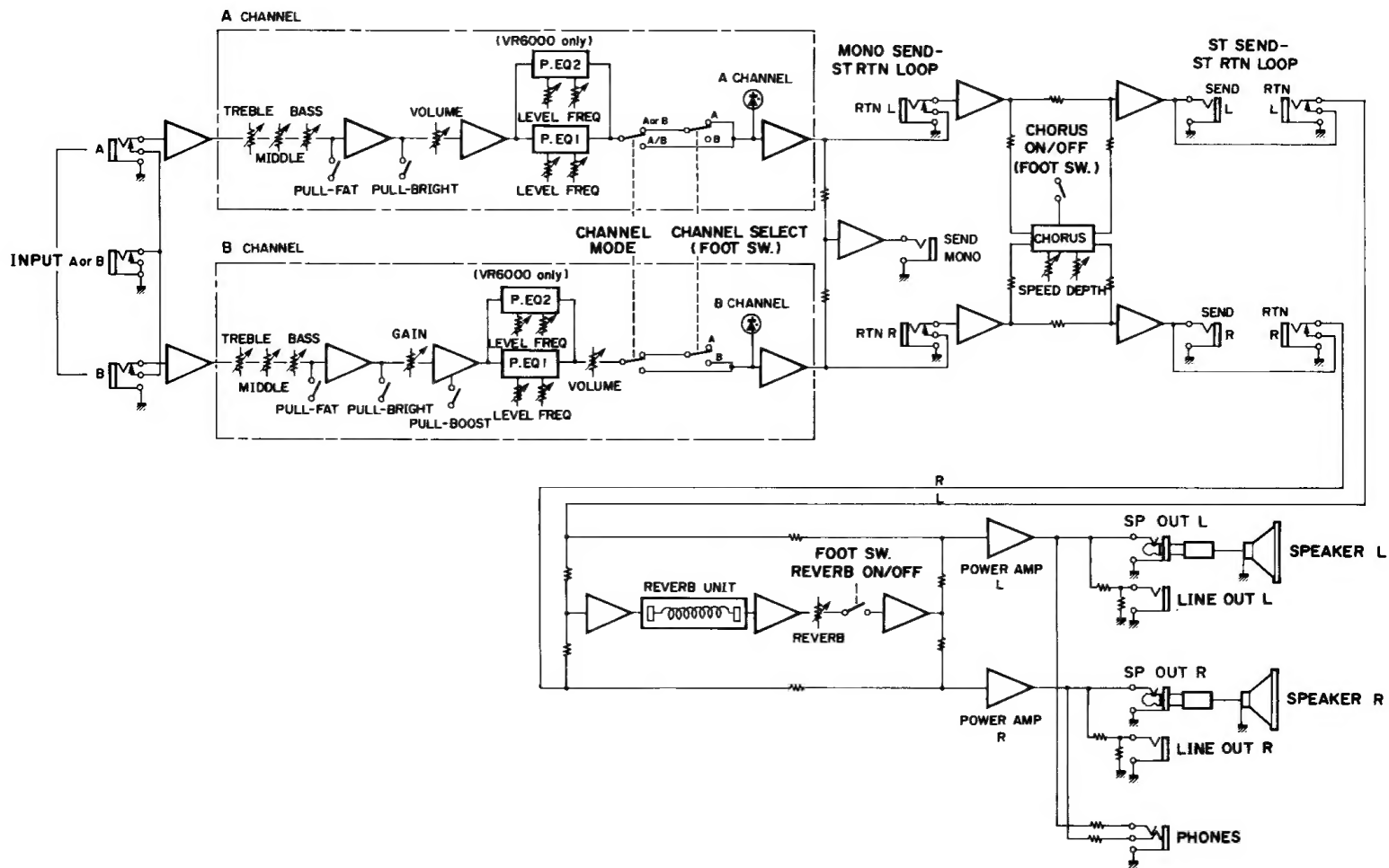
	VR4000	VR6000
Rated Output	25W + 25W rms (8Ω, 10% THD)	50W + 50W rms (8Ω, 10% THD)
Speakers	25cm x 2 (8Ω)	30cm x 2 (8Ω)
Enclosure	Open-backed enclosure	
Input Sensitivity (1 kHz) INPUT A INPUT B	-26 dB (VOLUME max.) -42 dB (GAIN & VOLUME max.)	
Input Level EFFECT RTN	+4 dB (47kΩ)	
Output Level SP OUT LINE OUT EFFECT SEND PHONES	See "Rated Output" -10 dB (600Ω) +4 dB (600Ω) 100 mW (8Ω)	
Noise (IHF-A) A CHANNEL B CHANNEL	-42 dB (VOLUME max.) -67 dB (VOLUME min.) -21 dB (GAIN /VOL. max., Pull BOOST) -58 dB (GAIN min., VOLUME max.) -68 dB (GAIN & VOLUME min.)	
Pull BOOST	+10 dB boost	
Pull FAT	+10 dB boost at 400 Hz	
Tone Controls TREBLE MIDDLE BASS	±15 dB at 5 kHz (Pull BRIGHT: +12 dB boost) +10, -5 dB at 800 Hz +5, -15 dB at 80 Hz	

	VR4000	VR6000
Parametric Equalizer P. EQ FREQ P. EQ LEVEL	100 Hz — 5 kHz ±15 dB variable	P.EQ 1 100 Hz — 1 kHz P.EQ 2 800 Hz — 5 kHz ±15 dB variable
Reverb Control REVERB	Spring reverb, variable	
Chorus Control CHORUS SPEED CHORUS DEPTH	(Stereo Chorus Effect) 0.1 Hz — 7 Hz Variable	
Switches	POWER ON/OFF, CHANNEL MODE, CHANNEL SELECT, CHORUS ON/OFF, GROUND	
Power Requirements US & Canadian Models General Model	120V AC, 60 Hz 110/120/220/240V AC, 50/60 Hz	
Power Consumption US & Canadian Models General Model	107 W 132 W	170 W 220 W
Dimensions (W x H x D)	729 x 563 x 275 mm (28-3/8" x 22-1/8" x 10-7/8")	
Weight	22.6 kg (49.9 lbs.)	26 kg (57.3 lbs.)

* 0dB is referenced to 0.775V RMS.

* Specifications subject to change without notice.

● BLOCK DIAGRAM



FCC INFORMATION

While the following statements are provided to comply with FCC Regulations in the United States, the corrective measures listed below are applicable world-wide.

This series of Yamaha professional music equipment uses frequencies that appear in the radio frequency range and if installed in the immediate proximity of some types of audio or video devices (within three meters), interference may occur. This series of Yamaha combo equipment have been type tested and found to comply with the specifications set for a class B computing device in accordance with those specifications listed in subpart J of part 15 of the FCC rules. These rules are designed to provide a reasonable measure of protection against such interference. However, this does not guarantee that interference will not occur. If your professional music equipment should be suspected of causing interference with other electronic devices, verification can be made by turning your combo equipment off and on. If the interference continues when your equipment is off, the equipment is not the source of interference. If your equipment does appear to be the source of the interference, you should try to correct the situation by using one or more of the following measures:

Relocate either the equipment or the electronic device that is being affected by the interference. Utilize power outlets for the professional music equipment and the device being affected that are on different branch (circuit breaker or fuse) circuits, or install AC line filters.

In the case of radio or TV interference, relocate the antenna or, if the antenna lead-in is 300 ohm ribbon lead, change the lead-in the co-axial type cable. If these corrective measures do not produce satisfactory results, please contact your authorized Yamaha professional products dealer for suggestions and/or corrective measures.

If you cannot locate a franchised Yamaha professional products dealer in your general area, contact the professional products Service Department, Yamaha Music Corporation, 6600 Orangethorpe Ave., Buena Park, CA 90620, U.S.A.

If for any reason, you should need additional information relating to radio or TV interference, you may find a booklet prepared by the Federal Communications Commission helpful:

"How to identify and Resolve Radio – TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington D.C. 20402 – Stock No. 004-000-00345-4.

Bescheinigung des Importeurs

Hiermit wird bescheinigt, daß der / die / das

Guitar Amplifier VR4000/VR6000

(Gerät, Typ, Bezeichnung)

in Übereinstimmung mit den Bestimmungen der

VERFÜGUNG 1046/84

(Amtsblattverfugung)

funk-entstört ist.

Der Deutschen Bundespost wurde das Inverkehrbringen dieses Gerätes angezeigt und die Berechtigung zur Überprüfung der Serie auf Einhaltung der Bestimmungen eingeräumt.

Yamaha Europa GmbH

Name des Importeurs

SERVICE

This product is supported by Yamaha's worldwide network of factory trained and qualified dealer service personnel. In the event of a problem, contact your nearest Yamaha dealer.